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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,959	11/18/2005	Jorge Calisse	JM-004 CIP US	3977

35023 7590 07/13/2006

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EXAMINER

SONNETT, KATHLEEN C

ART UNIT	PAPER NUMBER
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3731

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary	Application No.		Applicant(s)	
	10/523,959		CALISSE ET AL.	
	Examiner		Art Unit	
	Kathleen Sonnett		3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/7/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claim 21** is objected to because of the following informalities: minor typographical error. In line 1 of the claim, "a" should be changed to "an". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

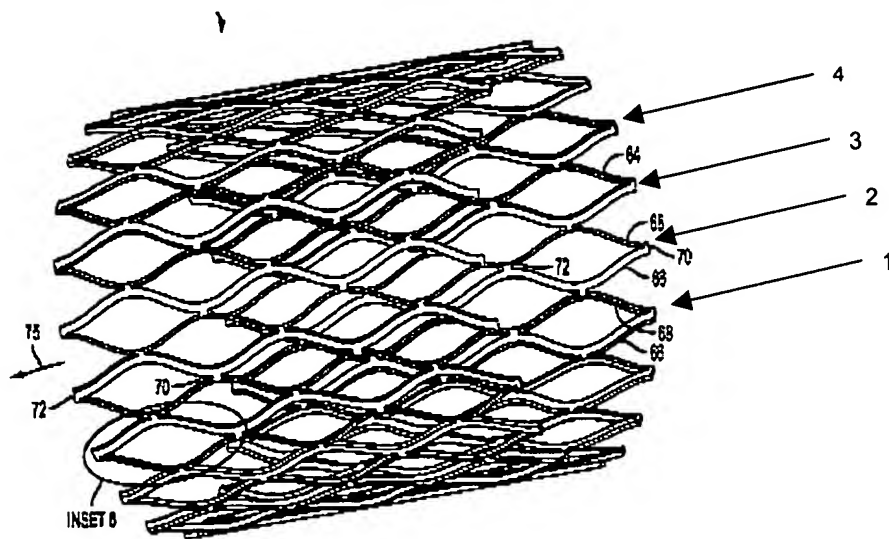
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-28** are rejected under 35 U.S.C. 102(b) as being anticipated by Besselink (WO 98/32412). Besselink discloses an expandable tubular member comprising a plurality of unit cells, each unit cell comprising a first segment (66) having proximal and distal ends and a substantially sinusoidal shape, and a second segment (68) having proximal and distal ends, the proximal end of the first segment coupled to the proximal end of the second segment, the distal end of the first segment coupled to the distal end of the second segment, the second segment being more flexible than the first segment, wherein the unit cell has a stable contracted state in which the second segment substantially conforms to the sinusoidal shape of the first segment, and a deployed state in which the second segment has a convex shape bowed away from the

first segment, characterized in that around a circumference of the expandable tubular member, two second segments are disposed between every two first segments.

4. With reference to the figure below, if one starts at the rigid segment 1 and goes up two rigid segments to the segment labeled 3, there are two second segments between 1 and 3. The same can be true for segments 2 and 4 and any other every two first segments.



5. Regarding claim 2, the second segment of each unit cell is coupled to the first segment so that the first segment inhibits deformation of the second segment in the contracted state (p. 3 lines 3-7).

6. Regarding claim 3, the second segment of each unit is stable only in the contracted and deployed states (p. 8, lines 24-28).

7. Regarding claim 4, the first segment is substantially rigid (p. 8, lines 4-6).

8. Regarding claim 5, the first segment of each unit cell comprises a larger cross-sectional area than the second segment (p. 8, lines 15-19).

9. Regarding claim 6, the first and second segments of each unit cell are manufactured using different materials (p. 8, lines 28-31).

10. Regarding claim 7, the proximal and distal ends of the first and second segments of each unit cell are coupled together by hinges ("11", "12", Fig. 9).

11. Regarding claims 8 and 9, Besselink discloses that the hinges may be elastic or plastic (claims 14 and 15; p. 17, line 25).

12. Regarding claim 10, the unit cells are transformed from the contracted state to the deployed state by application of a uniform radially outwardly directed force to an interior surface of the expandable tubular member (p. 8, lines 9-11).

13. Regarding claim 11, the first subset of the plurality of unit cells has a second segment with a first cross-sectional area and a second subset of the plurality of unit cells has a second segment with a second cross-sectional area (p. 10, lines 4-9).

14. Regarding claim 12, the plurality of unit cells are arranged in a longitudinally arranged series of circumferential rings (see Fig. 5b).

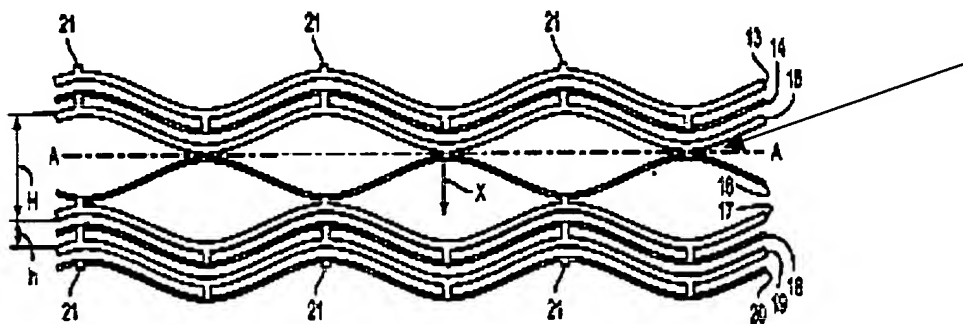
15. Regarding claim 13, the expandable tubular member is capable of attaining a different outer diameters depending on the amount and location of unit cells that are transformed to the deployed state. That is, if more unit cells are arranged to form a ring, the outer diameter of the expandable member will be larger.

16. Regarding claims 14-16, the unit cells are designed and arranged to provide a range of diameters for the expandable tubular member in a stepwise fashion (p. 3, lines

25-29). The expandable tubular member has an initial diameter at a first end, a final diameter at a second end, and at least one intermediate diameter between the first and second ends, the intermediate diameter differing from the initial and final diameters. The initial and final diameters can be the same (p. 11, lines 24-27).

17. Regarding claim 18, the second segments of adjacent unit cells are coupled to a common first segment.

18. Regarding claim 19, the second segment of each unit cell is coupled to the second segment of an adjacent cell by a joint disposed near a midpoint of the second segments.



19. With reference to the above figure, second segments (14, 16) are coupled to a common first segment (15).

20. In regards to claim 19 and the above figure, the second segment (16) is coupled to second segment (14) by a joint disposed near a midpoint of the second segments. The arrow points to the joint, which is disposed near a midpoint of segments (14, 16) and couples the two segments through interconnecting rigid member (15).

21. Regarding claim 20, see p. 4, lines 23-26.

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22. Besselink discloses a method for deploying an expandable tubular member having two substantially stable states, the method comprising providing a expandable tubular member comprising a plurality of unit cells in a contracted state, wherein each unit cell comprises a first segment having proximal and distal ends and a substantially sinusoidal shape, and a second segment having a proximal end that is coupled to the proximal end of the first segment and a distal end that is coupled to the distal end of the first segment, the second segment being more flexible than the first segment, wherein the second segment substantially conforms to the sinusoidal shape of the first segment in the contracted state, characterized in that around a circumference of the expandable tubular member, two second segments are disposed between every two first segments as described above in more detail and deploying at least one of the unit cells of the expandable tubular member by causing the second segment of the unit cell to deploy to a convex shape bowed away from the first segment of the unit cell (see Fig. 5a, 5b and p. 14, lines 12-16).

23. Regarding claim 22, the expandable tubular member is provided in the contracted state by compressing the expandable tubular member onto a delivery device (p. 3 lines 13-18).

24. Regarding claim 23, at least one unit cell is deployed by applying a radially outward force by expanding the delivery device (p. 3 lines 19- 22; p. 11 lines 18-20).

25. Regarding claim 24, the unit cells of the expandable tubular member are deployed in a stepwise fashion (p. 3 lines 19-26).

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26. Regarding claim 25, the number of unit cells that are deployed is proportionate to a radially outward force that is applied to the expandable tubular member (p. 11, lines 9-12).

27. Regarding claim 26, the unit cells are selectively deployed by providing second segments having varying diameters (p. 4, lines 4-6).

28. Regarding claim 27, the diameter of the expandable tubular member in a deployed state is varied by varying lengths of first and second segments of a unit cell (p. 11 line 31 and Fig. 12).

29. Regarding claim 28, the diameter of the expandable tubular member in a deployed state is varied by varying the number of unit cells that are provided in the contracted state (p. 11, lines 9-20).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen Sonnett whose telephone number is 571-272-5576. The examiner can normally be reached on 7:30-5:00, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anh Tuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCS
7/3/2006


ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER
7/10/06